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EUROPE MIDDLE EAST AFRICA

RESEARCH AND DEVELOPMENT

Monthly Progress Reports

Strictly Confidential

JULY 1980

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PME RESEARCH LABORATORY, JULY 1980

PROJECT TITLE : PRODUCT RESEARCH

PERIOD COVERED : JULY 7 - 25, 1980

WRITTEN BY : P. GHISTE

- Assistance was given to project SPOTLESS. NO, NO_2 and CO in MS and in SS of 16 prototype cigarettes are presently being analyzed. Results are not yet complete, they will be given in the next monthly report.

- The new Thermo Electron Model 10 Chemiluminescent NO/NO_x Analyzer was received and installed and is now operational. Familiarization with the new instrument is in progress.

- As a service for project SPONGECAKE (filter technology), a special report covering all filter additives (adsorbents) tested so far is being written (1).

REFERENCE

(1) Verbal request of B. Krasna to P. Ghiste.

P. Ghiste

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PME RESEARCH LABORATORY, JULY 1980

PROJECT TITLE : PRODUCT RESEARCH

PERIOD COVERED : JULY 1980

WRITTEN BY : Y. GENOUD

CAPILLARY GAS CHROMATOGRAPHY $(GC)^2$

- Fused Silica Capillary Columns (FSCC)

Work has been continued towards developing a method for coating of FSCC. Problems associated with the modification of the quartz surface are partly solved. Hydrofluoric acid treatment of FSCC followed by a Carbowax 20M deactivation looks promising.

- Triacetin Analysis

At the request of QC (1) 13 ESTROBOND B samples and 5 CA filters were analyzed for GPD (glycerol-propionate-diacetate) by $(GC)^2$ (2).

- Miscellaneous

13th International Symposium on Chromatography, Cannes, June 30 - July 4, 1980. The symposium was attended by over 1300 specialists from 30 countries. Approximately 50 technical papers on various aspects of chromatography were presented. Topics emphasized: fused silica capillary columns, $(GC)^2$ and sampling techniques.

Abstracts of the papers are available to interested scientists.

REFERENCES

(1) Memo of A. Widmer to Y. Genoud, July 17, 1980.
(2) Memo of Y. Genoud to A. Widmer, July 25, 1980.

Y. Genoud

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PME RESEARCH LABORATORY, JULY 1980

PROJECT TITLE : ANALYTICAL INVESTIGATIONS

PERIOD COVERED : JUNE 27 - JULY 24, 1980

WRITTEN BY : F. MOSER

N-NITROSAMINES

- Volatile Nitrosamines in SPOTLESS Cigarettes (1)

DMN and NPY in SS of 11 experimental cigarettes of the SPOTLESS series were determined. Nitrosamine values found and nitrate content of filler are summarized in Table 1. Although, because of some outstanding results, no final conclusions can be drawn, it can be seen from the figures in Table 1 that the elimination of nitrate (and water solubles) by aqueous extraction of blend 1 ØS-A-TOT and blend components 3 ØS-A-MD, 4 ØS-A-CH and 4 ØS-B-BU lowers the DMN and NPY levels in the sidestream smoke of cigarettes 2 ØS-A-TOT/SPO, 5 ØS-A-MD/SPO, 6 ØS-A-CH-SPO and 7 ØS-B-BU/SPO by 80 to 90 % (for codes of the experimental cigarettes see ref. 1).

- Non-volatile Nitrosamines

We are not satisfied with the gas-chromatographic separation of non-volatile, tobacco-specific nitrosamines on GP 3 % SP-2100 DB/Supelcoport 100/120, the column we used so far for the quantitation of NNN, NAtB and NNK (2). Although showing acceptable resolution when synthetic nitrosamine mixtures are applied (fig. 1) under experimental conditions, e.g. when experimental samples are analyzed, a peak with RT 5.9 min (fig. 1) not separable from the NAtB peak falsifies the NAtB values. In addition, when operating under routine conditions, the life time of the SP-2100 column is limited.

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The separation of NNN, NAtB and of NNK could now be improved by using 5 % SP-2401 DB (Supelcoport 100/120) as stationary phase. This column not only gives a better separation of NNN and NAtB (fig. 3) but also a base line separation of the unknown peak (RT 10.46 min) from the NNN peak (fig. 4). The identification of the unknown peak (N-nitrosoanabasine ?) is presently under investigation.

SERVICE FOR OTHER GROUPS

- 80 tobacco lots (TLA) were analyzed for ISH.
- Potassium, calcium and magnesium were determined in 28 NINO extracts by atomic absorption.
- Nicotine was determined by gas chromatography in two NINO yeast samples (3) (4).

REFERENCES

(1) Compare F. Moser, PME Research Lab., Monthly Progress Report, June 1980, pp. 8-17.

(2) K.D. Brunnemann, PME Research Lab., Monthly Progress Report, December 1979, p. 5.

(3) Memo of P. Karbacher to F. Moser, July 4, 1980.

(4) Memo of F. Moser to P. Karbacher, July 8, 1980.

F. Moser

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Table 1 DMN and NPY (ng/c) *)**) in the sidestream smoke of SPOTLESS cigarettes.

Cigarette Code	DMN (ng/c)	NPY (ng/c)	$N-NO_3$ (%)
1 ØS-A-TOT	267	58	0.27
2 ØS-A-TOT/SPO	50	7	0.03
3 ØS-A-MD	306	91	0.25
5 ØS-A-MD/SPO	54	8	0.02
4 ØS-A-CH	297	61	0.30
6 ØS-A-CH/SPO	47	9	0.02
7 ØS-A/SPO/SPO	results pending		--
1 ØS-B-TOT	results pending		0.35
2 ØS-B-TOT/SPO	results pending		0.015
3 ØS-B-FC	191	77	0.03
6 ØS-B-FC/SPO	128	15	0.007
4 ØS-B-BU	413	177	0.46
7 ØS-B-BU/SPO	94	18	0.05
5 ØS-B-OR	results pending		0.03
8 ØS-B-OR/SPO	results pending		0.002
9 ØS-B/SPO/SPO/SPO	88	12	--

*) Values as found; recovery approx. 80 %.

**) Mean values of 3 determinations.

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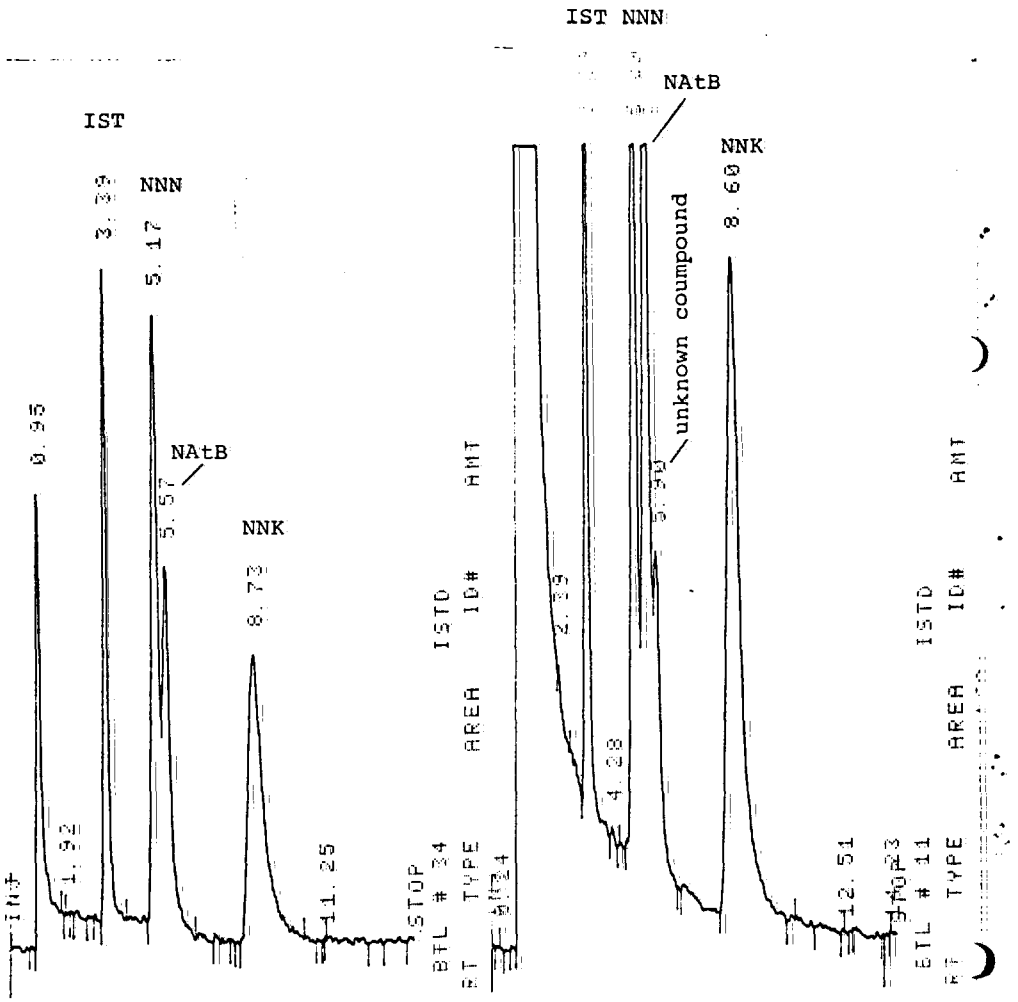
Gas-Chromatographic (GC/TEA) Separation of Tobacco Specific N-Nitrosamines on GP 3 % SP-2100 DB/Supelcoport 100-120 (3.5 m x 2.0 mm; oven temp. 213°)

Figure 1

Synthetic mixture of NNN, NAtB and NNK

Figure 2

Experimental sample (MS/Cambridge filter extract)



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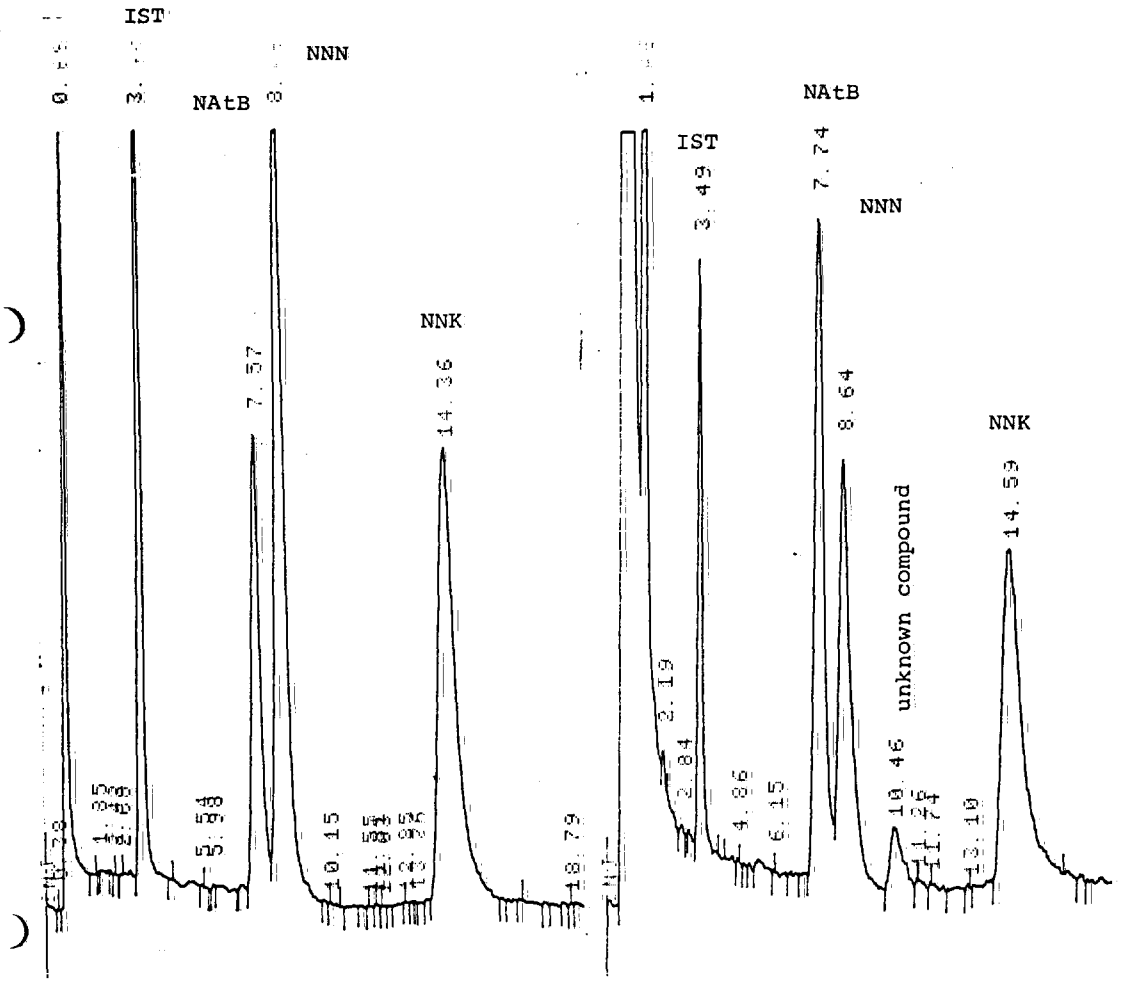
Gas-Chromatographic (GC/TEA) Separation of Tobacco Specific N-Nitrosamines on 5 % SP-2401 DB/Supelcoport 100-120 (3.5 m x 2 mm; oven temp. 220-250°).

Figure 3

Synthetic mixture of NNN, NAtB and NNK

Figure 4

Experimental sample (MS/Cambridge filter extract)



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PME RESEARCH LABORATORY, JULY 1980

PROJECT TITLE : ANALYTICAL INVESTIGATIONS

PERIOD COVERED : JUNE 30 - JULY 25, 1980

WRITTEN BY : E. LECOULTRE

TRIACETIN

A 200 g triacetin sample containing 25 % of GPD (glycerol-propionate-diacetate) was prepared (1) and has been sent to Product Development for further evaluation (2).

MLF cigarettes containing GPD in concentrations of 1,1 %, 1,35 % and 1,90 % were tested by Panel A. The trial with 1,35 of GPD is the closest to the control. As far as the taste direction is concerned, we are in line with the control (3). However, the cleanliness of the additive has to be improved.

CF ANALYSIS

With regard to the possible liberation of coumarin on tobacco in Germany by the German Federal Health Office, a large number of European brands is presently being analyzed for CF using gas chromatography (4). Problems associated with the method, e.g. insufficient clean-up (5), interference of CF peak with impurity peaks and reproducibility of results, have been solved by improving extraction and clean-up steps and using dihydrocoumarin as internal standard. The investigation of the procedure is complete and a special report will be written.

NEW EMPLOYEE

Miss Catherine Landry, Chemical Technician, joined the Analytical Research Group on 1st of July.

REFERENCES

(1) Memo of U. Nyffeler to W. Fink, July 2, 1980.
(2) Memo of E. Lecoultre to U. Nyffeler, July 17, 1980.
(3) Test de dégustation no. 224, July 15, 1980.
(4) Verbal request by MAH, Monthly R&D meeting, April 25, 1980.
(5) K.D. Brunnemann, PME Research Laboratory, Monthly Progress Reports February and June 1979.

E. Lecoultre

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Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

PME RESEARCH LABORATORY, JULY 1980

PROJECT TITLE : AGRICULTURAL CHEMICALS

PERIOD COVERED : JULY 1980

WRITTEN BY : M. SPECK

ROUTINE ANALYSES

Number of tobacco samples analyzed for pesticide residues in July:

Organochlorines	69
Organophosphorus	69
Organophosphorus + Methamidophos	7
Dithiocarbamate	43
Maleic Hydrazide	7
Ridomil	2

MH-30

Increasing amounts of residual MH-30 are found on American flue-cured leaf tobacco. MH-30 residue levels in 45 leaf samples analyzed in 1979 were sometimes double or triple the amount of 80 ppm recommended by the German Government (Table 1).

Table 1 MH-30 residue levels (ppm) in American flue-cured leaf samples analyzed in 1979

Range (ppm)	0-79.9	80.0-149.9	150.0-199.9	>200
Number of samples	9	27	6	3

To be on the safe side, MLK and MLF produced in Berlin and Munich from December 1979 until February 1980 were analyzed for MH-30. The MH-30 residue levels range from 30 to 49 ppm (1). In consequence of the high amounts of MH-30 found in finished products and in accordance with Leaf Department/Lausanne, the following PM brands will be checked monthly for MH-30: PMI (Munich), MLF (Serrières) MLF (Holland), MLF (Austria), MLK (London), MLB (Weltab), MLB (Eindhoven) (2).

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NEW ANALYTICAL METHODS

The method presently used for MH-30 analysis is time-wasting and dangerous. Due to the increasing number of MH-30 determinations expected and for safety reasons, investigations have been started to develop a new and simple method for analyzing maleic hydrazide. Efforts are concentrated on derivatisation reactions and quantitation by gas chromatography.

REFERENCES

(1) Memo of W. Fink to P. Karle, July 24, 1980.

(2) Memo of F. Moser to P. Karle, July 9, 1980.

M. Speck

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Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

PME RESEARCH LABORATORY, JULY 1980

PROJECT TITLE : SPECIAL EVENTS

PERIOD COVERED : JUNE 22 - JULY 21

WRITTEN BY : H. GAISCH

The June issue of the West German consumer magazine "TEST" carried a comparative study of smoke deliveries (nicotine, tar, CO, NO) of low delivery cigarettes in which were also included the leading full flavour brands for sake of comparison.

The test used a compounded uni-dimensional "toxicity scale", in order to be able to rate the cigarettes relatively to one another. The exact key to calculate the values has become available. The individual smoke constituents contribute pro rata to the index. One point on the scale is equivalent to:

nicotine	0.0600 mg
tar	0.9000 mg
CO	0.7200 mg
NO	0.0192 mg

Unfortunately our leading brand came out as top of the league, followed closely by HB (BAT) and CAMEL (Reynolds).

A protest was directed from the Industry Association towards the foundation which was responsible for the test.

Surprisingly, around mid-July a Liechtenstein based limited company called "World Health Associates" placed the "TEST" article as paid advertisement with the approval of the German "WARENTEST" foundation into dailies of West Germany, Holland, Switzerland, France and Italy.

Legal action is under consideration but the technical side of the issue is also being studied.

The tendency in European countries towards this sort of publication is on the increase (e.g. "WHICH" magazine, Sunday Times, etc..).

H. Gaisch

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Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

PME RESEARCH LABORATORY, JULY 1980

PROJECT TITLE : PROTAGORAS

PERIOD COVERED : JULY 1 - 26, 1980

WRITTEN BY : A. HAENGGI

The objective of the project PROTAGORAS is to produce cigarettes of tobacco from which protein has been removed. This is in order to eliminate some of the precursors of nitrogen-containing smoke constituents. At a later stage of the project, specific protein fractions will be re-added to the deproteinated filler for taste improvement.

1. TOBACCO FOR TESTS

The same tobaccos are used in the projects SPOTLESS and PROTAGORAS in order to obtain comparable analytical data.

B-Blend (Type MLF) (1)

Composition:	%
B-FC part 834 flue-cured (US + ET No. 2)	31
B-BU part 835 Burley (US + Subst.) + RL	53.7
B-OR part 836 oriental (Version MLF Atlantic 8222)	15.3

N-Anlaysis (2)

% TOTAL-N	% NH_3-N	% NO_3-N	% TA-N	% PROTEIN-N	% PROTEIN
2.95	0.22	0.22	0.33	2.18	13.62

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2. DEGRADITION AND/OR EXTRACTION OF PROTEIN FROM THE B-BLEND BY THE PROTEASE (CALBIOCHEM) (3)

Conditions: Temperature : 65° C/180 (r.p.m.)

Incubation : 6 hours, 200 mg enzyme/ 100 g tobacco, tobacco/buffer* or tobacco/water ≑ 1:10 (* PO_4 - Sørensen, 1 mol.)

Results

Extraction	percentage extraction of proteins	
	PROTAGORAS	SPOTLESS
Enzyme + buffer	56.1	--
Buffer only	28.9	--
Water only	25.3	17.3

3. OPTIMALIZATION OF PROTEASE CALBIOCHEM : QUANTITY (4)

Tobacco : B-Blend (MLF)

Extraction : 1:10 (tobacco : Sørensen buffer 6 hours at 65° C/180 (r.p.m.)

Enzyme : Protease (Calbiochem)

mg enzyme/100 g tobacco	percentage extraction of protein
0	31.7
100	46.5
200	49.9
300	54.4
400	53.3
500	51.5

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4. ELIMINATION OF PROTEIN FROM TOBACCO EXTRACT (5)

				percent decrease of protein
A.	By acids	(precipitation)	: TCA	: -16.3
			HCL	: -19.7
B.	By NAOH	(")	:	-11
C.	By alcohol	(")	:	0.0
D.	By microorganism	(metabolisation)	:	-38

(STRAIN NCYC 707 (3) C. utilis, incubation 120 hours at 37° C).

Results:

	TOTAL-N mg/l	NH_3-N mg/l	NO_3-N mg/l	TA-A mg/l	PROTEIN-N mg/l	PROTEIN mg/l
Control	2520	430	430	345	1315	8219
Sample	1814	240	420	337	817	5106

5. ACTIVITY OF PROTEOLYTIC ENZYMES

A range of enzymes is under test for suitability in terms of degrading tobacco protein. As each supplier uses different units of enzyme activity, a method is being adapted for activity measurements that suits our purpose in order to establish an activity ranking of enzymes.

REFERENCES

(1) Project Spotless Report, May 1980, June 1980.

(2) Notebook A. Hänggy, p. 27.

(3) " " , pp. 29-33

(4) " " , p. 43

(5) " " , p. 34

(6) Project Protagoras Report, June 1980, point 1.

A. Hänggi

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PME RESEARCH LABORATORY, JULY 1980

PROJECT TITLE : SALAMANDER-II

PERIOD COVERED : JULY 1980

WRITTEN BY : Y. GENOUD

The objective of SALAMANDER II is to develop zero ISH cigarettes of commercial quality.

As several results are still missing, there is no report this month on this project.

The work is continuing on the preparation of derivatives of cysteine, cystine and thiazolidine compounds and on the cigarette prepared for the project SPOTLESS (1).

REFERENCE

(1) Y. Genoud, Progress Report, June 1980.

Y. Genoud

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Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

PROJECT TITLE : Nitrate Reduction by Controlled Fermentation

PERIOD COVERED : June 27th - July 25th

WRITTEN BY : C. Ruf

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1. TRIALS

The first extended period of trials ended on July 11th after three months of continuous run. Since then the equipment has been cleaned and overhauled (Ref. 1).
A progress report about this period is in preparation.

1.1. Trial NINO 60

An infection located in the fermenter was reported the previous month (Ref. 2). Because of the continuous running mode of the fermenter any microorganisms still present were diluted to infinity. At subsequent checks no infection could be verified, in other words the infection disappeared without any further intervention. The trial NINO 60 was terminated on June 30th.

1.2. Trial NINO 61

1.2.1. This trial ran from July 1st to 11th. The objective was to increase the temperature of the fermenter in order to reduce the amount of cooling water. Temperatures between 30°C and 38°C were tried and only a residual amount of 10 ppm NO_3-N was found after fermentation. The average concentration of NO_3-N before the fermenter was about 860 ppm.
As compared to 30°C the need for cooling water is 50% reduced at 38°C.

1.2.2. In average the fermentation produces about 18 g of dry NINOMASS per kg of extract. Since the first trials in the pilot plant, the centrifuge was adjusted in order to obtain a NINOMASS as consistent as possible. But this resulted in a bad separation, about 55% of the insoluble solids were still left in the centrifuged extract. After optimization of the separation more than 95% of the NINOMASS was removed from the fermented extract. On the other hand, the NINOMASS as separated now, contains much more extract. A good compromise seems not possible with this centrifuge. A very significant part of extract could be recovered from the NINOMASS by rotary vacuum filter.
The mass balance of the centrifugation with the new working conditions is shown below : all numbers are related to 10 kg of dry weight feedstock.

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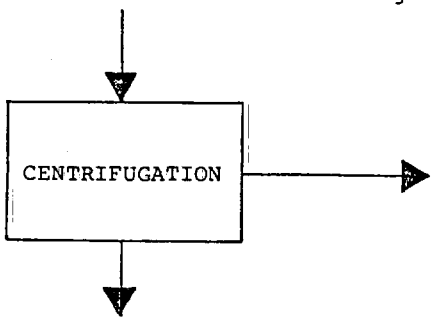
Fermented extract

total flow : 80 kg
insoluble solids : 1.50 kg
total solids : 3.92 kg



NINOMASS

total flow : 26.5 kg
insoluble solids : 1.45 kg
total solids : 2.31 kg

Centrifuged extract

total flow : 53.5 kg
insoluble solids : 0.05 kg
total solids : 1.61 kg

2. NINO SCALE-UP

The NINO/RL engineering study from PEC was received on July 17th and is now being studied.

3. PILOT PLANT

See monthly report of July 1980 : "Pilot Plant Operations" by N. Lüthi.

4. NINOMASS

4.1. 150 kg of dried NINOMASS were sent to V L G Z for use as animal feed.
See also monthly report of July 1980 : "Unit Operation I" by P. Karbacher.

4.2. During the last week of trial NINO 61 we produced about 20 kg of dried NINOMASS which was sent to PM USA in Richmond and Miller Brewery in Milwaukee on request of the research department. Some analytical results are listed below in comparison with data of a dried but unwashed NINOMASS as used by V L G Z for their trial.

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		unwashed NINOMASS (Ref. 5 and 6)	washed NINOMASS (Ref. 3 and 4)
O.V.	%	4.5	5
ashes	%	11.6	9.4
potassium	%	9.3	3.2
calcium	%	1.1	0.5
magnesium	%	0.4	0.1
nicotine	ppm	433	92
tot. nitrogen	%	not available yet	7.0

5. NINO/RCB

About 250 kg of concentrated extract without NINOMASS produced during trial NINO 61 were recombined with washed stems in trials NINO/RCB No. 9 - 11 in Onnens.
See also monthly report : "Reconstituted Tobacco", July 1980, by P. Karbacher.

6. REFERENCES

Ref. 1 : Monthly report : "Pilot Plant Operations", July 1980, N. Lüthi.

Ref. 2 : Monthly report : "Nitrate Reduction by controlled Fermentation", June 1980, C. Ruf.

Ref. 3 : Résultats d'analyse, July 16th, from F. Moser to C. Ruf.

Ref. 4 : Résultats d'analyse, July 17th, from A. Haenggi to C. Ruf.

Ref. 5 : Résultats d'analyse, July 17th, from F. Moser to P. Karbacher.

Ref. 6 : Résultats d'analyse, July 24th, from A. Widmer to P. Karbacher.

PROCESS DEVELOPMENT

C. Ruf

July 30th, 1980
CLR/sde

0000143394

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PROJECT TITLE : Pilot Plant Operations

PERIOD COVERED : June 29th - July 25th, 1980

WRITTEN BY : N. Lüthi

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1. EQUIPMENT

1.1. Extraction

A Sweco vibrator was tested to improve the liquor clean up at the outlet of the extractor. The results of these tests showed no significant improvement against the existing basket filter (Ref. 1).

1.2. Dryer

The dryer is in bad conditions and broke down several times. It was provisionally repaired and an estimate was asked from the FTR workshop to overhaul the equipment during the summer shut down of the pilot plant.
In the long run the dryer will have to be replaced.

1.3. Centrifuge

The motor of our centrifuge was repaired and controlled by Alfa-Laval.
A written report on the reasons for these motor failures is expected from the supplier.

2. MATERIALS

2.1. Antifoam Paracum

Our problem with the antifoam Paracum was discussed with the supplier, Dr. Kolb AG (Ref. 2). The supplier agreed to improve upon the quality control of the finished product.

2.2. Extract of NINO trial 57

All the drums in Onnens were checked in order to change the corroded plugs (Ref. 2).
About a third of the plugs had to be changed.
Two samples of extract were given to the PME QC lab for the determination of aluminium (Ref. 3).

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The following results were found :

	ppm Al
Sample 1 Extract from a drum with corroded plug	373
Sample 2 Extract from a drum with not corroded plug	5

We decided not to use the extract from those drums with corroded plugs for further NINO/RCB trials.
In the future plastic plugs will be used.

3. LABORATORY

3.1. The second lab technician started work on July 14th.

3.2. An Auto Analyzer Technicon of the second generation has been ordered. It will be used for the simultaneous determination of nitrate-nitrogen, ammonia-nitrogen, reducing sugars and total alcaloids.

4. MAINTENANCE OF THE EQUIPMENT IN THE PILOT PLANT

The first extended period of NINO trials was terminated on July 11th. Since then the equipment has been cleaned and overhauled.

4.1. Extraction

During the revision and the cleaning of the V-shape screw different parts were found strongly corroded. All these parts have been ordered in stainless steel.

4.2. Dryer

By dismantling the equipment it was seen that the cylinder as well as the double jacket of the dryer have to be replaced completely. This will be done by the FTR workshop.

4.3. Sterilization line of the extract

The tubes of the heat exchanger were found partly clogged by deposits.

5. REFERENCES

Ref. 1 : Notebook 1, J. Chassot, pages 34-37.

Ref. 2 : Monthly report, June 1980, Pilot Plant Operations, N. Lüthi

Ref. 3 : Memo to C. Ruf from A. Widmer, détermination de l'aluminium dans l'extrait de tabac, July 17th, 1980.

N. Lüthi, PROCESS DEVELOPMENT

July 30th 1980/NIL/sde

N. Lüthi

0000143396

Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

PROJECT TITLE : UNIT OPERATIONS I

PERIOD COVERED : JUNE 28th - JULY 28th, 1980

WRITTEN BY : P. Karbacher

NINOMASS

A sample of washed Ninomass was produced in the fluidized bed dryer and sent to the USA (Ref. 1).
The meeting with VLGZ took place on July 16th, 1980.
A plan for the use of our Ninomass for animal feed was established and 150 kg of dried Ninomass were sent to VLGZ.
The plan provides the addition of Ninomass at 3 different levels into fodder for chickens. Each batch will be tested on a representative number of animals according to VLGZ-own procedures.

RL-HANDSHEET MAKING UNIT

During the period covered, no trials were conducted.
A valley beater and a Schopper-Riegler "Freeness" tester were ordered.
The offered sheet moulds are only available for a maximum sheet size of 8" x 8". Therefore the sheet mould was not yet ordered.
We continue to look for a sheet mould with a bigger size.

REFERENCES

Ref. 1 : Monthly report, July 1980, Nitrate Reduction by Controlled Fermentation, C. Ruf.

PROCESS DEVELOPMENT

P. Karbacher

July 29th, 1980 KPA/kpa

0001433397

Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

PROJECT TITLE : RECONSTITUTED TOBACCO

PERIOD COVERED : JUNE 24th - JULY 25th, 1980

WRITTEN BY : P. KARBACHER

MONIQUE/RCB

Equipment modification

During the summer shut down from July 14th to August 1st the following modifications are under way :

- Eight membrane pumps will be replaced by Moyno pumps.
- Installation of a separate tank for liquid ammonia. The requested volume per batch is controlled by a level detector.
- The walls will be painted and the ceiling insulated.

Roll coater, rubber roll

On July 7th the rubber roll had to be replaced again. No stripes were observed in the sheet during the week before shut down. We continue to follow up this problem.

Waste water

Until July 4th, 1980 the Monique/RCB waste water was collected in a container of a volume of 5 m^3. An outside contractor took care of the transport by tank truck to the municipal waste water plant of Neuchâtel.
A new, subsoil waste water tank of a volume of 20 m^3 for both ETNA and Monique/RCB was finished. This new tank will be evacuated by the same firm as before.

Monique/RCB-Trials (Ref. 1)

Further trials were conducted according to our sheet quality improvement program (Ref. 2).
From all four trials 100 % cigarettes were made. These cigarettes will be smoked versus 100 % cigarettes of the current production by Panel A on Wednesday, July 30th.

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Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

Nino/RCB-Trials (Ref. 3)

Three trials were carried out for the research department using the additive formula of the current production. The feedstock consisted of 100 % washed stems from the pilot plant and the corresponding extract was added.

- Trial 9 : Extract with Ninomass
- Trial 10 : Not fermented extract
- Trial 11 : Extract without Ninomass

Trial 9 and 11 were a repetition of previous unsuccessful trials (Ref. 4, 5).

Again big problems were encountered and only a few kgs of bad sheet were produced. In spite of serious efforts we were not able to produce any sheet samples during trial 10.

The main problem was the non uniform slurry application to the steelbelt probably due to the lack of binding properties.

References

Ref. 1 : Memo from P. Karbacher to J. P. Caccivio; July 4th, 1980

Ref. 2 : Letter from P. Karbacher to J. P. Caccivio; July 9th, 1980

Ref. 3 : Letter from P. Karbacher to H. Gaisch; July 14th, 1980

Ref. 4 : Monthly report, December 1979, Reconstituted Tobacco II, A. Robbiani.

Ref. 5 : Monthly report, March 1980, Reconstituted Tobacco II, A. Robbiani.

PROCESS DEVELOPMENT

P. Karbacher

July 29th, 1980 KPA/kpa

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Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

PROJECT TITLE : NEW MATERIAL DEVELOPMENT
WRITTEN BY : E. ERKOHEN
PERIOD COVERED : July 1st - July 28th 1980

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1. TIPPING PAPER

1.1 ECUSTA MICRO-MECHANICALLY PERFORATED PAPERS

Five bobbins with different porosities were received from Ecusta (Ref. 1, 2). MLK cigarettes were made with three tipping papers of porosities 54, 382, 602 l/h/4 cm. The dilutions and smoke deliveries obtained for the above mentioned tipping papers are compared to a standard tipping paper Z3/60. The results are given in the table below :

Porosity l/h/4 cm	54	382	602	60 (Z3/60)
Dilution (%)	10	21	28	12
TPM (mg/cig.)	20.5	16.2	14.2	19.7
DPM (mg/cig.)	18	14	13	17.5
CO (mg/cig.)	17.6	13.7	11.8	17.6
NO (mg/cig.)	0.33	0.27	0.24	0.33
SN (mg/cig.)	1.16	1.04	0.90	1.14
Puff count	9.1	9.5	10.1	9.2

Cigarettes made with the tipping paper having the porosity of 54 l/h/4 cm and the control Z3/60 were submitted for taste evaluation. Panel B found no significant difference whereas Panel A evaluated the cigarettes made with the Ecusta paper as being "harsh" and "giving a slight strange off taste"

1.2 MODIFIED TIPPING PAPER BENKERT Z4/90 AND Z4/100

Benkert developed a new perforation system on tipping papers. Basically the porosity with this system remains at the same level but the holes are smaller and more numerous. Tipping paper Z4/100 produced with this system of perforation showed a higher dilution and thus provoked lower deliveries (1 mg lower) on MERIT cigarettes manufactured in PM Munich for Italy (Ref. 1) received and analysed in April 1980.
New MERIT cigarettes with modified tipping paper Z4/100, standard Z4/100 (Control) and modified Z4/90 were received from Munich.

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The smoke results obtained with the modified tipping paper Z4/90 are close to the ones obtained with the standard tipping Z4/100. As noticed before the modified Z4/100 gave a higher dilution. The smoke deliveries are summarized in the table below.

	Z4/100 standard	Z4/100 modified	Z4/90 modified
Dilution (%)	26	30	27
CO (mg/cig.)	10.9	9.2	10.5
NO (mg/cig.)	0.20	0.18	0.20
TPM (mg/cig.)	8.3	7.8	8.1
DPM (mg/cig.)	7.5	6.9	7.2
SN (mg/cig.)	0.50	0.45	0.46
Puff count	7.8	7.9	7.6
HCN (µg/cig.)	87	75	80
Total Aldehydes (mg/cig.)	0.86	0.79	0.81

1.3 MALAUCENE MICRO-LASER PERFORATED TIPPING PAPER

Five bobbins were received from Malaucène with a porosity of 58 l/h/4 cm. We will now attempt to match this paper to the Z3/60 of Benkert.

1.4 PARLIAMENTS LIGHTS WITH HAUNI MECHANICAL PERFORATION AND LASER PERFORATION

Three kinds of PLL cigarettes were received from PM Munich.

1) Standard PLL wiht Hauni mechanically perforated tipping paper (6 holes)
2) Trial 1 PLL with Hauni laser perforated tipping paper (6 holes)
3) Trial 2 PLL with Hauni laser perforated tipping paper (12 holes)

The smoke results (TPM, DPM, tar) and dilutions obtained with laser perforated tipping papers were close to the ones obtained with mechanically perforated tipping paper. The taste evaluation showed that cigarettes having 12 laser perforated holes were better than cigarettes having 6 laser or 6 mechanically perforated holes.

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2. CIGARETTE PAPER

2.1 TERVAKOSKI TERCIG O 8.5 ND 4321

First version of Tervakoski O 8.5 ND 4321 cigarette paper was prefered to the second version for use of MLF diluted cigarettes in Finland and in Eastern countries (Ref. 3).

2.2 WATTENS TOBACCO STALKS "TAB 39300" AND BAMBOO "WP 60/RV-1"

The taste evaluation of Panel A showed that in comparison to the standard the cigarettes made with Bamboo "WP 60/RV-1" gave "a strange of taste" whereas the cigarettes made with tobacco stalks "TAB 39300" "were harsh and picked a little bit". Nevertheless the later type of cigarette paper was suggested for use on a light cigarette where a "defect" is wanted (Ref. 4). Ten bobbins of "TAB 39300" were ordered from Wattens, and will be used in project GOSTA.

3. FILTER PAPER

3.1 ECUSTA ULTRA POROUS PLUG WRAP (ULTRAPOR M)

The physical tests results have not been received yet.

3.2 SCHOELLER & HOESCH

One bobbin of porous plug wrap coated with hot melt and having a porosity of 250 K was received from Schöller & Hösch. This bobbin has been sent to QC for physical testing.

4. FILTER MATERIAL

Eastman submitted a tow 3.3/44'000 Y (Yellow Sheet No 5577). Tests have not yet begun.

E. Erkohen

1000143402

Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

REFERENCES

1) Monthly report on New Material Development of April 1980 by B. Krasna

2) Monthly report on New Material Development of June 1980 by E. Erkohen

3) Memo from E. Erkohen of June 2nd 1980 to U. Nyffeler

4) Taste evaluation of July 8th 1980

11/08/1980/ELE/cap

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Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

PROJECT TITLE : CIGARETTE DEVELOPMENT TECHNICAL REPORT

WRITTEN BY : Z. SINGER

PERIOD COVERED : July 1st - July 25th 1980

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250 COCKPIT BLUE

Re-engineering
Objectives : K : 14 mg
N : 0.9 mg
CO : 14 mg
Puff count : 9 (max. 10)
Format : 7.975 / 25 / 90

In order to reach the Marketing objectives, the development of this project continues on the basis of the new leaf formula of the American blend PMI. Seven versions have been made and analysed. Now two of them (96 P, 98 P) are being analysed without dilution. Based on these results it would be possible to choose the right dilution (Tipping paper) to achieve the objectives. The prototype No 100 P will be submitted to the Panel A for taste evaluation.

300 MARLBORO MENTHOL

Modification of the blend
CO reduction
Objectives : K = 13 mg
N = 0.8 mg

The cigarettes sent from Munich on the 1st of July have been analysed on the 18th of July 1980.
Taste evaluation is under way. The objectives has not been achieved in tar (K = 10.3 mg) probably because of the new blend.

365 BARBARA

Objectives : K : 13 mg
N : 0.9 mg
Puff count : 9
Format : 7.975 : 20 / 84.4

The development of this cigarette will continue with two new blends (one with 11 % of Expanded Tobacco) and with a new AC from Richmond which is expected shortly.

Z. Singer

Z. Singer

1000143404

Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

PME PRODUCT DEVELOPMENT, July 1980

PROJECT TITLE : PRODUCT DEVELOPMENT LABORATORY
PERIOD COVERED : June 20th - July 27th 1980
WRITTEN BY : S. BEGUIN

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1) CIGARETTE PRODUCED IN THE MANUFACTURING DEPARTMENT

a) Total quantity : 408,000
b) Number of prototypes : 45

2) TOBACCO BLEND TRIALS IN THE PRIMARY DEPARTMENT

a) 7 x 1,000 kg (unflavoured)

3) FILTER RODS PRODUCED IN THE FILTER MAKING DEPARTMENT

a) Total quantity : 80,000
b) Number of prototypes : 3

4) PACKS (20 cig.) PRODUCED IN THE PACKING DEPARTMENT

a) Total quantity : 13,800
b) Number of projects : 6

5) PRODUCT TESTS PREPARED : 2

S. Béguin

S. B

SEB / cap

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PME PRODUCT DEVELOPMENT, July 1980

PROJECT TITLE	:	FLAVOUR DEVELOPMENT
WRITTEN BY	:	J.-P. FATTON
PERIOD COVERED	:	June 25th - July 25th 1980

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1. PROJECTS

MIAMI - BARBARA

The ingredients ordered from PM USA have not yet arrived.

2. FLAVOUR DEVELOPMENT

HARVARD

Three flavour versions in the MAA direction were developed on the basis of synthetic tobacco aromas and applied on prototype 108 P.

3. CONTACT WITH SUPPLIERS

For the development of low tar cigarettes we are looking for products that enhance the tobacco taste and increase the impact. Several suppliers have been contacted on this subject.

Several new tobacco flavours have been received from Dragoco and Haarmann & Reimer.

J.-P. Fatton

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PROJECT TITLE : TOBACCO ANALYSES

WRITTEN BY : L. JOSEPH

PERIOD COVERED : July 1st - July 30th 1980

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1. SPECIAL TRIALS

DENITRATED LTR (1) (2)

The reduction in equivalents of the K of the denitrated sheet (Lot 7195) in comparison to the non-denitrated standard (Lot 7198) is approximatively the same that is observed for the reduction of the $N\text{-}NO_3$.

The ratio $\frac{\Delta K\ [eq]}{\Delta\ N\text{-}NO_3\ [eq]}$ is 0.81.

This might be an indication that the denitration was made by cristallisation of the KNO_3.

FERMENTED AND NON-FERMENTED SWISS TOBACCOS

We do not note any significant difference in regard to the tobacco analysis. However the smoke analysis of the non-fermented tobacco shows just a little less CO delivery and little more DPM delivery.

MD TOBACCO, STORAGE INFLUENCE (3)

We have not yet begun the analyses.

2. ROUTINE TOBACCO LOT ANALYSES

INTRODUCTION OF INPUTS ON EDP

The partial analytical results of forty lots were introduced in the analytical data list.

LOTS UNDER EVALUATION

Thirty lots.

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Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

LOTS AVAILABLE, BUT NOT YET ANALYSED

About thirty lots.

3. ASSISTANCE TO OTHER PROJECTS

REFERENCE CIGARETTES

The reference cigarette of FLINT, FLINT ULTRA and COCKPIT BLUE have been made. The results were given to the respective project leaders.

RCB

The analytical results of lots No 0124, 0125 and 0126 are available. The lot No 0124 (Trial RCB No 7) has not yet been smoked due to a bad combustibility. We have received four samples (Lots No 0130 to 0133) with different additive formulae. The TLA are under way, but we are running into problems on the cigarette maker due to the high moisture content of the sheet.

NINO / RCB

We have received two samples of RCB-NINO trials : one with 100 % of NINO washed stems (Lot 7999) and the corresponding denitrated extract with NINO mass (Lot No 0128 ; trial NINO/RCB No 9), the other with 100 % of NINO washed stems (Lot No 7999) and the coresponding denitrated extract without NINO mass. As a first step we have made cigarettes by hand in order to determine how well these products burn.

L. Joseph

L. Joseph

REFERENCES

1) Letter from LTR to H. Böckle, dated April 8th 1980
2) Tobacco analysis monthly report of June 1980
3) P. Karlé's report : "Chemical, physical and organoleptic examination of MD tobaccos..., of May 12, 1978", dated September 19th 1978.

0000143408

Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

PROJECT TITLE : Cigarette and Smoke Analysis

Period Covered : June 30 - July 31, 1980
Report Written by : F. Senehi
Report Approved by : F. Lopes

CO GROUP MEETING - TOBACCO ADVISOR COUNCIL, LONDON

On July 16, 1980 the undersigned participated in the CO group meeting.

During this meeting, it was noted that all manufacturers had now received LGC data back to the beginning of Survey 12.

It is planned that LGC will supply all data from Survey 10 to Survey 13 so that the statistical study will be ready for the final Report in November 1980.

Compared to the tar and CO results obtained by Gallaher, Carreras-Rothmans and Philip Morris on Survey 12, LGC found on the average, the following deviation :

	LGC - GALL	LGC - CRL	LGC - PME
Tar (mg / cig)	+ 0,2	+ 0,1	+ 0,3
CO (mg / cig)	- 1,6	- 1,0	- 0,9

LGC = Government Chemist's Laboratory (United Kingdom).

COMPARATIVE RESULTS BETWEEN THE OFFICIAL SWISS LABORATORY OF DR. ROMANN AND QC PME (GRAPHS 1 AND 2)

A statistical study was carried out in order to determine the regression curves for the tar and the smoke nicotine calculated from the results obtained by Dr. Romann and QC PME on the same sampling (Ref. 1).

The coefficient of correlation r for these two curves is higher than 0,98. As mentioned in the monthly report of June 4, 1980, Dr. Romann uses the Filtrona 302 smoking machine (8 ports) which gives systematically lower tar and SN results than the Filtrona 300 smoking machine (20 ports).

SALES WEIGHTED AVERAGE, GERMANY

The sales weighted average tar and smoke nicotine deliveries were calculated for 1979 (Ref. 2).

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Compared with 1978, we observed for the "segments":

1. "ALL CIGARETTES"

   The same tar of 13, 5 mg

   An increase of nicotine from 0,74 to 0,78 mg

2. "ALL COMPETITIVE BRANDS"

   A decrease in tar from 13,6 to 13,5 mg

   An increase in smoke nicotine from 0,74 to 0,78 mg

3. "ALL P.M. BRANDS"

   The same tar of 12,9 mg

   The same nicotine of 0,79 mg.

SMOKING PANEL

The following versions were mail-out tested:

1. Brunette Double F

   Z 37 = Standard / Batch 460 cigarette paper velin 1615

   J 16 = Trial / Batch 460 without ES-MD, cigarette paper Pela 200 special

   Preference was given to the standard (not significant).

2. Muratti Ambassador

   K 93 = Standard (100 % charcoal Pica)

   R 26 = Trial - 25 % charcoal Chemviron UKCT + 75 %, Charcoal Pica

   Preference was significantly given to the trial

3. Marlboro

   L 96 = First step, Atlantic project 5,7 % ES-AM / 2,0 % E.T.

   D 18 = Second step, Atlantic project 4,7 % ES-AM / 4,0 % E.T.

   Preference was significantly given to the D 18.

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Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

PROJECT TITLE : Cigarette and Smoke Analysis

PRODUCT REPORTS

Product Reports were written on the following new or modified brands:

Brand	Manufacturer	Country of sale
Cecil 84/F (New Filter cig.)	Scandinavian Tob.	Denmark
Sirocco 85/F (New brand)	Sekap S.A.	Greece
Winston Lights 79/F (New brand)	Reynolds	Norway
Du Maurier 84/F (New format)	B.A.T.	United Kingdom

QC FINISHED PRODUCTS

F. Senehi

REFERENCES

1. Letter dd 07-14-1980 from M. Pittet to F. Senehi
2. Letter dd 07-28-1980 from F. Senehi

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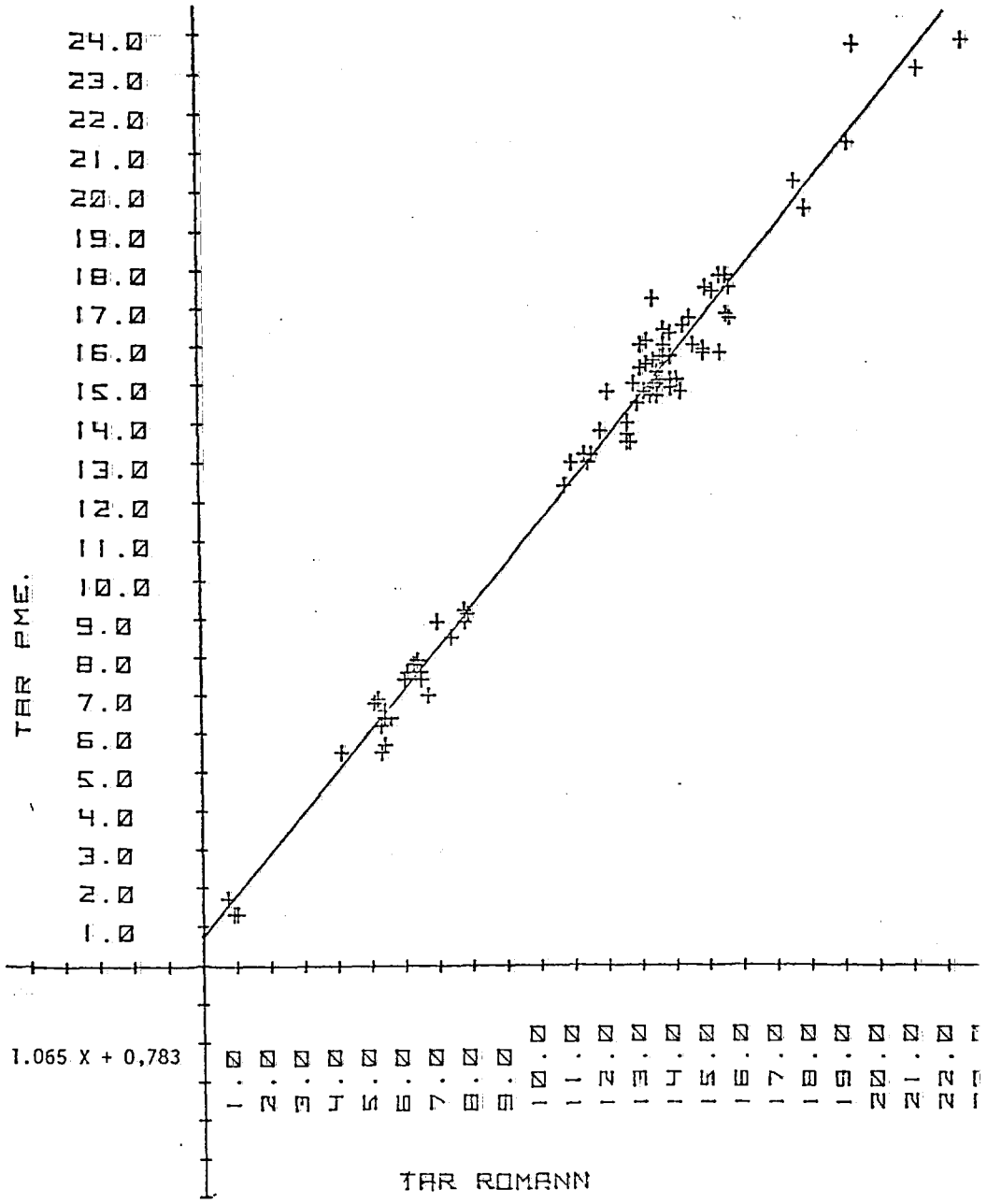
Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

GRAPH 1

COMPARATIVE RESULTS BETWEEN THE LABORATORY OF DR ROMANN AND QC PME

(MAY 79 / NOVEMBER 79 / MARCH 80)



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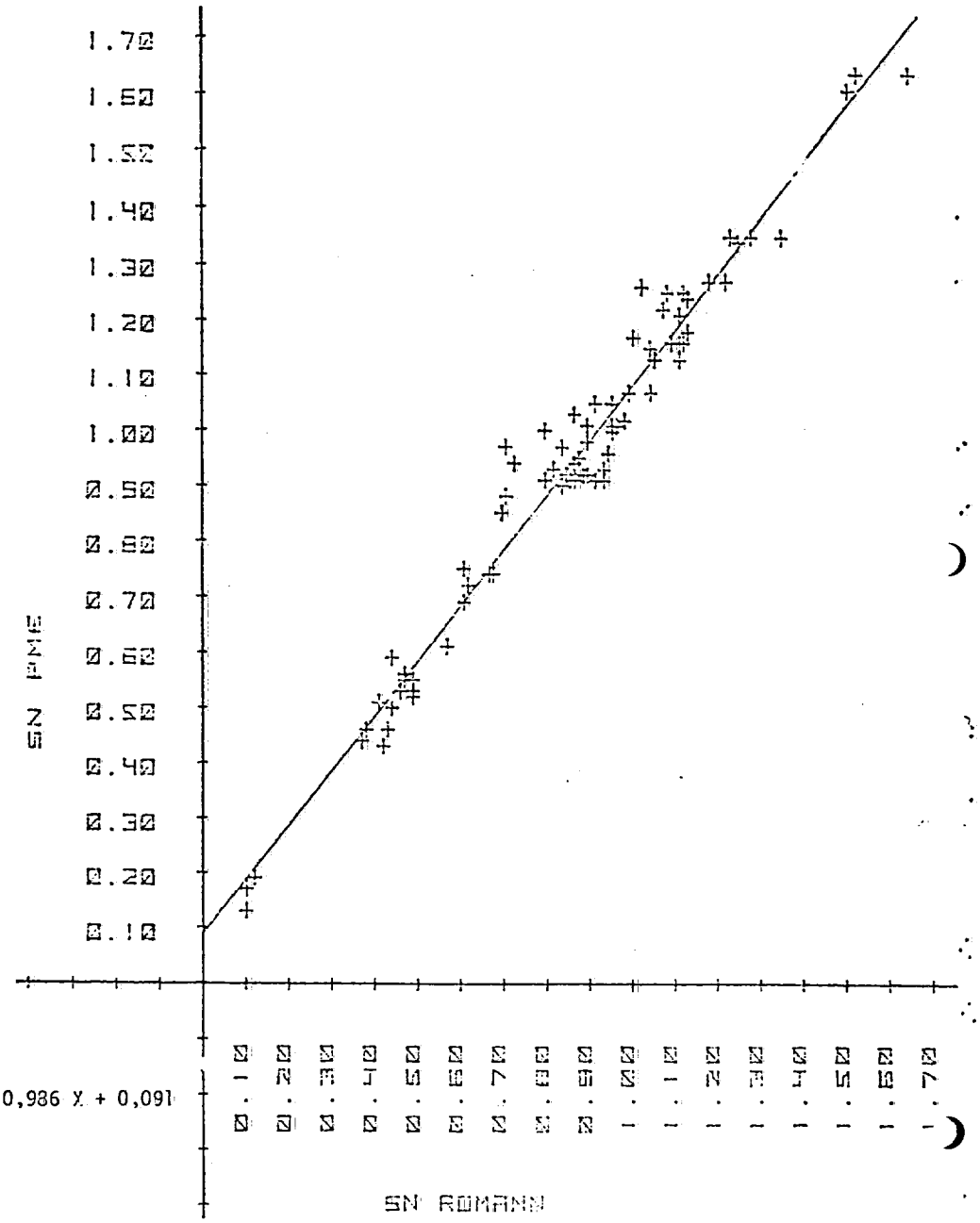
Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

GRAPH 2

COMPARATIVE RESULTS BETWEEN THE LABORATORY OF DR ROMANN AND OC PME

(MAY 79 / NOVEMBER 79 / MARCH 80)



Y = 0,986 X + 0,091

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PROJECT TITLE : Additives and Analytical Services

Period Covered : June 24 - July 29, 1980
Report Written by : A. Widmer
Report Approved by : F. Lopes

ORGANISATION

- Casing kitchen

  Preparation methods for 38 solutions (Burley Casing, Burley Top Flavour, AC- and PC - solutions) used in FTR were established. Ref. 1.

  Propositions for the resolution of some manufacturing problems were made. - Ref. 2.

  Procedures (organisation between the QC lab and the casing kitchen, total volume of PC solutions etc.) were newly defined or modified. Ref. 3, 4.

- On June 1st, the determination of the hot water solubles was introduced as a routine method (PM method A - 12 A) for tobacco lot analyses. Up to now, 111 out of 252 samples collected since December 1979, have been analysed.

TRIALS WITH NEW SUPPLIERS OF TOBACCO ADDITIVES

- Diethylene glycol (PROCHEM, Zürich; ex SHELL (NL) / yellow sheet 5744, 0.5 l).

  The sample corresponds to our specification. As only a little quantity is used in FTR, further trials are not foreseen in Neuchâtel.

- Invert sugars (DEVOLDER, Bruxelles / 1kg) - Ref. 5.

  Acidity, pH, density and water content are within specifications. As regards the content of reducing sugars, the value is slightly too low. A new sample was ordered.

- MFSBC Dry Flavour (PMI, Richmond / yellow sheet 5596, 540 kg) - Ref. 6.

  The test cigarettes (MLF-CH) were accepted by Panel B. As the product gives only a slightly lower dust-production during preparation of Burley-Casing than the present formula, further trials are not planned.

QUALITY CONTROL OF TOBACCO ADDITIVES

- Licorice powder (Ringsted & Semler, ex Mc ANDREWS) - Ref. 7.

  The sample is within our specifications.

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QUALITY CONTROL OF PC-SOLUTIONS

- MF - PC export - Ref. 2

  This solution often showed considerable differences in various parameters such as density. Trials showed that this problem was only due to a bad mixing and a too short stirring time (Honey and inverted sugar sticked to the bottom of the vat).

TRIALS WITH NEW SUPPLIERS OF FILTER ADDITIVES

- Activated charcoal (ICI AG, Zürich; "ATLAS c 6" / yellow sheet 5717, 1 kg).

  The sample is out of specifications as regards CCl_4 - index (55 %) and iron content (0.4%).

- Activated charcoal (PICA, Levallois (FR) / 4 x 100 g).

  During production of activated charcoal, up to 30 % are lost as dust. PICA proposed an agglomerated and crushed product made with this dust which could be added at any rate to the normal charcoal. Analyses showed a CCl_4-index of 45 % for this product. Its addition to the normal charcoal results in a decrease of the CCl_4 - index (10% added : 64 %, 20 % added : 61 %, 30 % added : 60 %). Further trials are not planned.

QUALITY CONTROL OF FILTER ADDITIVES

- Activated charcoal 35 x 50 mesh (PICA. Levallois (FR) / blue sheets 7393 and 7586, 2 x 2000 kg) - Ref. 8.

  Blue sheet 7393: the CCl_4 - index was located between 56 % and 65 % with an average of 62 % (specification: max 60 %). As Panel B accepted the test-cigarettes, this shipment was accepted.

  Blue sheet 7586: The CCl_4 - index was located between 60 % and 72 % with an average of 66 %. The shipment had to be refused.

  In connection with the problems of these two shipments, a series of comparative analyses between PICA and the QC laboratory was organized. PICA values on four samples were between 1 % and 3 % lower. Even by taking these lower values into account, both shipments were still out of specifications.

TRIALS WITH NEW SUPPLIERS OF GLUES

- Glue for packing machine (LAESSER AG, Erlinsbach, "LESSO 5021/3" / yellow sheet 5693, 2500 kg) - Ref. 9.

  The good results of the first two trials were entirely confirmed. Accepted as a new standard glue (replaces "LESSO 5014").

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Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

- Glue for cigarette-seam (HENKEL CHEMIE GmbH, Pratteln; "SPA 7636 x 3 / yellow sheet 5716, 200 kg) - Ref. 10.

  The good results of the first trial were confirmed. Panel B accepted the test cigarettes (MLF-CH).

- Filter glue (hot melt) (ISAAR RAKOLL CHEMIE, Wels (Austria); "IPATHERM WS 1067 D" / yellow sheet 5645, 3 kg).

  Machineability: No significant difference from the standard. Panel A and B : accepted (MLF - CH). However, after a storage time of two months, we found a difference from the standard glue: the seam of the filter rods were easy to open.

- Filter glue (hot melt) (DELFT CHEMIE AG , Winterthur; "CIE LOK 80", "234 - 2980 DN" / yellow sheet 5690, 5 kg).

  It is a hot melt type, already used in PMH and PMG.

  Machineability: No significant difference from the standard. Panel B : accepted.

  After a storage time of two months, no difference from the standard was observed.

  For a long term test, 50 kg were ordered.

ASSISTANCE QC FOR OTHER COUNTRIES

- Determination of specific conductivity - Ref. 11.

  Upon request of PMH, the specific conductivity of ethanol, deionised water, propylene glycol, glycerine, liquid sugar, inverted sugar and Burley casing was determined.

SERVICES FOR OTHER GROUPS

- Analyses for foil mentholating:

  Menthol in cigarettes and inner foil (87 samples)

- Analyses for P. Karbacher:

  Water, ash and fat content in yeast (1 sample)

- Analyses for C. Ruf:

  Determination of aluminium by atomic absorbtion in tobacco extract (2 samples).

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Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

Determination of sugars by HPLC in tobacco extract (19 samples).

Determination of sugars by HPLC in stems (4 samples). The determination according to the standard method was not possible because unidentified compounds interfered with the peaks of fructose and inner standard. The impurities were eliminated by a preliminary treatment of the extract with two different types of ion exchangers.

QC ANALYTICAL SERVICES

A. Widmer

REFERENCES

1. Letter from A. Schwarb to the Casing kitchen, dd July 23, 1980
2. Report A. Schwarb, dd July 16, 1980
3. Memo A. Schwarb, dd July 7, 1980
4. Minutes of the meeting, dd July 4, 1980
5. Letter from A. Widmer to Mr. B. Desmet (Devolder), dd July 28, 1980
6. Monthly report A. Widmer February 1980
7. Letter from A. Widmer to Mr. R. Froidevaux, dd July 8, 1980
8. Letter from Mr. C. Moreau (PICA) to A. Widmer, dd July 4, 1980
9. Monthly report A. Widmer June 1980
10. Monthly report A. Widmer Mai 1980
11. Letter from A. Widmer to Mr. B. van Duuren, dd July 28, 1980

04.08.1980 ALW/mat

0001143417

Source: https://www.industrydocuments.ucsf.edu/docs/qqml0000

PROJECT TITLE : Material testing

Period Covered : June 30 - July 31, 1980
Report Written by : P. Balliger
Report Approved by : F. Lopes

POROUS PLUG WRAP

HF 40 K - 28 variante 4/2 Glatz
FY HP 40 K Wattens

(Ref. 1)

According to the analytical results, above mentioned porous plug wrap papers correspond to Schoeller & Hoesch FU POV 40L standard quality presently used on pan European Marlboro fully diluted. Although cigarettes MLF - CH produced with these materials gave acceptable smoking figures, it was not possible to obtain a final decision regarding taste evaluation.

Therefore, trials with both porous plug wrap papers have to be repeated.

CIGARETTE PAPER

E 36095 Wattens

(Ref. 2)

This cigarette paper can be compared to the basic quality WP 60 but contains different additives.

However, MLF - CH produced with this material, were refused for taste reason.

CARDBOARD

With a view to diversify cardboard supply sources for hinge lid packs, analytical investigations were carried out on the following material proposed by different suppliers.

- Komet 240 g/m^2 Feldmühle

  Both printed and unprinted cardboards gave acceptable results.

  However, it depends on the outcome of the industrial trial presently running in PMG - Münich, whether this material could be taken into consideration to compete with our standard quality (Iggesund's Invercote D 240).

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- Ensocoat 240 g/m^2 ENSO

The mechanical properties and the appearance of this cardboard are acceptable.

As a small quantity of printed hinge lids has already been produced without problem, a larger trial will be done later on in order to evaluate the machineability of this cardboard.

- Kopparwhite gravure Kopparfors
new quality
210 g/m^2 - 230 g/m^2

Due to the fact that, the internal layer of this cardboard is made with a thermomechanical TMP paste (wood), the visual appearance is somewhat less whiter than the pure cellulose cardboard.

Based on these considerations, above mentioned cardboard cannot be compared with our Iggesund standard quality for the time being.

COLLECTIVE POROSITY TEST

The purpose of this operation is to have a valuable porosity comparison within QC PME affiliates as well as with our main suppliers for various cigarette wrapping material.

In a first step, several test strips of different Schoeller & Hoesch cigarette papers were measured respectively in FTR, PMG - Münich and PMG - Berlin. The results gave no significant variations.

Consequently, the same samples were submitted to Schoeller & Hoesch in order to determine whether a correlation curve is necessary.

SUPPLIER'S VISIT TO QC PME

(Ref. 3)

July 2, 1980 : Miguel y Costas
- Trials situation
- analytical methods

QC PME

P. Balliger

REFERENCES

1. Monthly report March 1980
2. Monthly report April 1980
3. Report of visit

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PROJECT TITLE : SPECIFICATIONS / PROCESS ASSURANCE

Period Covered : 26.6. - 22.7.1980
Report Written By : Catherine Flury and Thierry Bel
Report Approved By: J.B. Boder

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0. SPECIFICATIONS - OVERALL

0.1 New PME Standard Cigarette Diameter

PME approval has been received to reduce all cigarette diameters from the old 7,95 - 8,00 (7,975) mm to the new PME standard diameter 7,95 mm, which corresponds to PM USA's 25 mm circumference. - All filters used on such cigarettes will have a diameter of 7,86 mm (old: between 7,85 and 7,90 mm). - From now on, the diameter difference of 0,09 mm between filter and cigarette will be considered as a PME standard specification.

A letter for general information has been addressed to MM. Boder, Tschudin, Stolt, Guyot, Lopes, Grünbaum, Burkhalter, Nyffeler, and Amaduzzi.

Instructions for immediate action have been released to all PME production centers, including Intertaba.

Another series of letters went to Mr Steinacher and his Area Operation Managers for clarification of the situation at the licensee production centers.

As far as known to date, the PME production centers intend to adopt the new standard diameter in August/ September, 1980.

0.2 Standard Moistures Packed Cigarettes

A PME product modification request, prepared for and discussed during the QC PME meeting of April, 1980, has been accepted by all concerned (Boder, Guyot, Nyffeler, Tschudin).

Information and instructions have been sent to all concerned. The PME production centers intend to adapt their packed cigarettes moistures to the new standards in the very near future.

The new standard packed cigarette moistures will be issued as PME standard specifications as follows:

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- Main group: 12,5 % mc packed cigarettes
  Cigarettes: Marlboro, Merit, etc.
- Ambassador group: 12,0 % mc packed cigarettes
  Cigarettes Ambassador and similar blend groups
- Exceptions group: 11,0 or 11,5 % mc
  For special blends

0.3 Method No 705

A new PME method 705, entitled "Rules for the establishment of manufacturing specifications" has been distributed in English (German and French translations in preparation). This method should complete the specification guidelines and be particularly useful for the training of persons not yet familiar with specifications.

0.4 PME Standard Specifications

Such a file is in preparation. For the moment, is contains drafts regarding the new PME standard cigarette and filter diameters, the standard packed cigarette moisture, temperatures at tobacco pre-conditioning, stacking of cases on pallets, etc.

0.5 Pack Models

Our office has started to build up a collection of packs of all products, including the licensee and L & M brands.

1. SPECIFICATIONS - PER PRODUCTION CENTER

1.1 FTR Fabriques de Tabac Réunies SA Neuchâtel

- The numbers printed on the pack have been reduced for BRS 003 (3-cigarette sample) from 7/0,6 to 6/0,5 mg and BRC/BRP 001 from 23 to 21 mg condensate.

- The bundles MEK Mercedes King Size and PMK Ph. Morris King Size are now made of a display carton which replaces the previous soft material.

- MAA 069 Ambassador, for sale in Tunisia, is a new packing version sourced from FTR.

1.2 INM Intertaba S.p.A. Zola Predosa

A new filter making spec has been prepared for the manufacture of filter MER 100 Merit, 34.2900, for sale to PMG Munich.

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1.3 PMH Ph. Morris Holland Eindhoven/Bergen op Zoom

1.4 PMG Ph. Morris Germany Munich/Berlin

- The stepwise change from velin to vergé cigarette paper on the German Marlboro has been completed in June, 1980.

- Filter paper FU-POV 40 L, replacing FU-POV 24 K, has been approved on the diluted German Marlboro.

1.5 WEL Weltab SA Bruxelles

1.6 PM UK Ph. Morris London

1.7 Licensees

- Yugoslavia:
  A complete set of spec has been prepared for project Maraschino, CEH Chesterfield Filter Long (100 mm). The tobacco will be prepared in Sarajevo, the cigarette will be manufactured in Mostar.

- Greece:
  The filter and cigarette making specs of the Greek MLK Marlboro King Size have been reveiwed.

- Finland:
  All information has been recevied from the AOM for the modification of the two Finnish brands BEN Belmont Menthol and MLL Marlboro Lights. The expected dates of manufacture of the re-engineered cigarettes are 18.8.1980 for MLL and 1.9.1980 for BEN.

- Nigeria:
  A complete set of the Nigerian filter making, cigarette making and packing specs has been received and checked. Processing specs and solution recipes are outstanding.

2. MATERIAL SPECIFICATIONS

2.1 MPP + QC PME Coordination Meeting

A reduced meeting has taken place on 10.7.1980 to settle the points for which time was too short during the June meeting.
Next meeting: 4.9.1980 in Neuchâtel.

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2.2 Submissions to Suppliers

Several submissions have been made to the firms Baumgartner (filters), Eastman (tow), Schoeller & Hoesch (filter paper), and Braunstein (cigarette paper).
Further submissions will be made shortly for tipping papers supplied by Benkert, Tann, and Malaucène.

2.3 Approvals by Suppliers

Handler & Nattermann, for internal foil.

2.4 PME File "Usage of Materials"

The sections "filter" and "cigarette" have been updated.
The section "additives TA/FA" is being reviewed.
A new group "GS glues + solvants" has been drafted.
The lists for additives and glues will newly contain complete information regarding the manufacturer (name, place) and the PME supplier or sub-contractor.

2.5 Technical Drawings

- The file for tipping papers has been updated.

- After discussions with different persons, it has been decided not to state the technical drawing numbers on the manufacturing specifications.

2.6 Panel A Approvals

- Following different problems which have turned up during the last months, it has been suggested to Leaf PME to summon a meeting with the persons directly involved.

- Our office has started to prepare a special "Panel A Approval/Refusal" file.

3. PME STANDARD RECIPES

3.1 New Recipes
MERUK-PC and MERUK-AC, production PM Holland
NW-5-AC, production FTR for sale to PM Nigeria
BEN-AC, production ATO Finland

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3.2 Modified Recipes

CC-1D-PC, CC-1F-PC, and CLI-PC, production FTR (increase of volume - water).

The complete PME standard recipe file has been reviewed and completed by the PME Material codes.

4. SPECIFICATIONS ON EDP

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5. PROCESS ASSURANCE

5.1 AccuRay

FTR's proposal made after the QC PME meeting cannot be accepted by the other production centers. A final decision will have to be made soon. However it seems to be definitely impossible to adopt a unique system in all production centers.

5.2 NTM Non-Tobacco Material Weights in Specifications

Pending.

5.3 Diameters of Filters and Cigarettes

Settled, refer to point 0.1.

5.4 Dilution

An inventory of the monthly results of all production centers has been made. The report contains results of dilution, RTD, packed cigarette moisture, total cigarette weight, and compressibility, since January, 1979, and up to May, 1980. The brands taken into consideration are MLF Marlboro Filter and MLK Marlboro King Size. This report will be distributed.

5.6 Burley Treatment

All information regarding the present Burley treatment methods (dryers and Proctor & Schwartz) are available and a report will be distributed within short.

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5.7 Kitchen and Pre- and After-cutting Solutions

Complete information collected in all PME production centers is now available to this office and a situation report will be established for the intention of all.

5.8 Production of Starch Glue

Information has been gathered in all production centers and a report for the intention of all persons interested will be prepared.

5.9 Tobacco Weights

This report is ready for distribution. It contains:
- the monthly effective tobacco weights for the cigarettes MLF - MLK - MLB - MER - MPH, from January, 1980 to May, 1980;
- the average tobacco savings, with mini and maxi savings per machine;
- the light weight rejects, with extreme deviations per machine.

5.10 New Processing Depts. PMG Berlin and PMH Bergen op Zoom

Contacts have been established with the two production centers concerned and a first meeting is expected to take place beginning August, 1980.

Thierry Bel Catherine Flury

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PROJECT TITLE : Physical Testing Methods

Period Covered : July 1 - July 31, 1980
Report Written by : T. Piko
Report Approved by : F. Lopes

PHYSICAL TESTS

The results of the cigarette physical tests from August 1979 to May 1980 were given to Dr. U. Kreuter, who will make a complete statistical evaluation.

The new cigarette samples will be distributed at the beginning of September 1980.

PRESSURE DROP AND DILUTION INSTRUMENT EX RICHMOND

The first PDI/DDI instrument was set up in the development lab to measure prototype cigarettes.

MISCELLANEOUS

One RTD/Dilution instrument as well as one paper porosity tester were dispatched to Amer-Tupakka.

QC - METHODS

T. Piko

T. Piko

04.08.1980 THP/mat

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Project title : Instrumentation and process automation

Written by : M. Thévoz

Period covered : July 1980

The undersigned, M. Thévoz, joined the company in June 1980 and is presently in charge of the automation of cigarette smoke routine analysis.

Data processing of finished products QC

A project study was initiated with the objective to increase the status of automation in the smoke laboratory. For this purpose, a direct link between instruments and a laboratory computer for acquisition, storage and computation of analytical data should offer the following major advantages.

- Improvement of analysis throughput without increasing personnel number.
- Reduced error risks in data transcription and transfer.
- Better control of off-range analytical values.
- Immediate reports and listing of recorded data.
- On-line and interactive connection with EDP services.
- Remote interrogation capabilities via host computer.
- Direct access to results and information on analysis in progress.
- Immediate comparison and correlation between old and new analytical data.
- Connection facilities for PME cigarette data bank filling.
- Local on-line statistics.

At the present time, four different companies, (HP, Digital, IBM, Data General) have been contacted. A detailed description of the specifications and constraints was given to their technical staffs in order to define the most suitable configuration. A critical analysis of the presented products will be done during August and discussed at the beginning of September with the potential laboratory users.

M. Thévoz

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T S. OSDENE

AUG 22 1980

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